



R22 Regulation

Subject code:4P5AF

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous, Accredited by NAAC with 'A+' Grade)

B.Tech V Semester Regular/Supplementary Examinations, November 2025

SOLID AND HAZARDOUS WASTE MANAGEMENT (CE)

Maximum Marks: 60

Date:12.11.2025

Duration: 3 hours

- Note:
- 1.This question paper contains two parts A and B.
 2. Part A is compulsory which carries 10 marks. Answer all questions in Part A.
 3. Part B consists of 5 Units. Answer any one full question from each unit.
 4. Each question carries 10 marks and may have a, b, c, d as sub questions.

Part-A

All the following questions carry equal marks (10X1M=10 Marks)		Marks	CO	Bloom Tx
1.a)	Define solid waste.	1M	1	BL1
b)	Write about the sources of solid waste.	1M	1	BL2
c)	Compare transfer and transport of municipal solid waste.	1M	2	BL4
d)	Identify the alternative collection system.	1M	2	BL3
e)	What is Hazardous waste?	1M	3	BL1
f)	What is the Labelling of hazardous waste.	1M	3	BL2
g)	Classify the biomedical waste.	1M	4	BL2
h)	Write the importance of radiation standards.	1M	4	BL5
i)	What you learn from E Wate?	1M	5	BL1
j)	Define global strategy.	1M	5	BL2

Part-B

Answer All the following questions. (5X10M=50Marks)		Marks	CO	Bloom Tx
2	a) Define solid waste and hazardous waste. What are the different types of solid waste commonly generated in urban areas?	5M	1	BL1
	b) Describe the environmental and health impacts of improper solid waste management.	5M	1	BL2
OR				
3	a) Identify the materials used for containers with practical approach.	5M	1	BL3
	b) Distinguish between public health and economic aspects of storage with live examples.	5M	1	BL4
4	a) Analyze the effectiveness of the "3Rs" (Reduce, Reuse, Recycle) in the management of solid waste.	5M	2	BL4
	b) Outline the chemical characteristics, conditions of solid waste.	5M	2	BL2
OR				
5	a) Plan the selection of location dumping of solid waste.	5M	2	BL3
	b) Describe the different methods used for the collection and transportation of municipal solid waste.	5M	2	BL2

6	a) Define hazardous waste and describe its common categories.	5M	3	BL1
	b) Describe the basic principles and steps involved in hazardous waste management.	5M	3	BL3
OR				
7	a) Summarize the effects of improper management hazardous waste regulations.	5M	3	BL2
	b) Evaluate the effectiveness of current hazardous waste management regulations in your country or region.	5M	3	BL5
8	a) Define biomedical waste and classify its different types.	5M	4	BL1
	b) Explain the importance of proper biomedical waste management in preventing infections.	5M	4	BL2
OR				
9	a) List the common sources of radioactive waste in medical, industrial, and nuclear power sectors.	5M	4	BL1
	b) How would you apply safety measures to handle and store low-level radioactive waste in a medical facility?	5M	4	BL1
10	a) Analyze the challenges in managing e-waste in developing countries.	5M	5	BL4
	b) Assess the advantages and disadvantages of exporting e-waste to other countries for recycling.	5M	5	BL5
OR				
11	a) How would you implement a plastic waste reduction program in a coastal city?	5M	5	BL2
	b) What are the main sources of plastic waste?	5M	5	BL2